CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN FRANCISO BAY REGION AMENDING WASTE DISCHARGE REQUIREMENTS, ORDER NO. 98-052, FOR: NPDES PERMIT NO. CA0037842 ORDER No. 00-108

SAN JOSE/SANTA CLARA WATER POLLUTION CONTROL PLANT CITIES OF SAN JOSE AND SANTA CLARA SAN JOSE

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the 1. The San Jose/Santa Clara Water Pollution Control Plant (hereinafter the Discharger) submitted a request dated August 2 2000 for an amount of Order No. No. 20 052 for discharge of request. SANTA CLARA COUNTY Regional Board) finds that:

request dated August 9, 2000 for an amendment to Order No. No. 98-052 for discharge of recycled request uated August 7, 2000 for an amenument to Order 190. 190. 70-032 for disciplination and all amenument (streamflow augmentation).

Water to Coyote Creek for aquatic habitat enhancement (streamflow augmentation).

- 2. The Discharger owns and operates the San Jose/Santa Clara Water Pollution Control Plant (Plant Plant Plan Ine Discharger owns and operates the San Jose/Santa Clara County, California. The Plant provided at 700 Los Esteros Road, San Jose, Santa Clara County, California advanced coorden, treatment of materials and county. advanced secondary treatment of wastewater from domestic, commercial and industrial sounds. within the City of San Jose, City of Santa Clara, City of Milpitas, West Valley Sanitation District Constitute Constitute District District Constitute Con BACKGROUND Cupertino Sanitation District, Burbank Sanitary District, Sunol Sanitar Sanitation District 2-3. The Discharger's current service area has a population of approximate 3. The Plant provides screening and grit removal, primary sedimentation, secondary (biological tensor) traction structure ablamation and deallamation for the provider of the
 - The riant provides screening and grit removal, primary sedimentation, secondary (olological removal) treatment, nitrification, filtration, chlorination, and dechlorination. recycling, including streamflow augmentation, is not dechlorinated prior to distribute additional obligations added to additional chlorine is added to meet Title 22 requirements. Recycled water used for stranger and a stranger and
 - 4. In 1990, the State Water Resources Control Board (State Board) ordered (WQ 90-5) Discharger implement actions to limit flows that exceed 120 million gallons per day (mg Discharger implement actions to minit mows that would not further impact rare and endangered spectary weather effluent flow or flows that would not further impact rare.
 - 5. In 1991, the Discharger proposed the South Bay Action Plan (SBAP) to comply with W In 1991, the Discharger proposed the South Bay Water Recycling program to respect to the South Bay Water Recycling program to respect to the South Bay Water Recycling program to respect to the South Bay Water Recycling program to the South Ba SDAr included implementation of the South Day water recycling program to redischarged to the Bay during dry weather. The 1991 SBAP also included to the Bay during dry weather. enhancement projects, like the one proposed in this Amendment, for study. The R approved the SBAP with Resolution No. 91-152. 1

The went nental Board

- 6. In 1992, the Discharger certified an EIR for the South Bay Water Recycling program. The EIR included streamflow augmentation.
- 7. On May 28, 1997 the Discharger submitted the Revised South Bay Action Plan (RSBAP) to the Regional Board. The SBAP proposed both near and long-term solutions to reduce the discharge. The Revised South Bay Action Plan included streamflow augmentation as a pilot project. These projects were proposed in addition to Phase I of the 1991 Action Plan, which the Discharger is currently implementing.
- 8. At its September 1997 meeting the Regional Board amended the Discharger's NPDES permit to implement the RSBAP (Board Order 97-111). The RSBAP includes 5 programs: Indoor Water Conservation; Expanded Water Recycling; Industrial Water Recycling/Reuse; Inflow/Infiltration Reduction; and Environmental Enhancements. The Coyote Creek Streamflow Augmentation Pilot Project was developed to implement an Environmental Enhancement project as approved by the Regional Board under Order 97-111.
- 9. Discharge from the Plant to Artesian Slough is regulated under waste discharge requirements and NPDES Permit No. CA0037842 (Order 98-052, adopted by the Regional Board on June 17, 1998), and recycled water reuse is regulated under waste discharge requirements in Water Reclamation Requirements Order 95-117. Order No. 98-052 specifies the current requirements for implementation of the Revised SBAP and includes as Provision E.3.1.P the task to implement Environmental Enhancement Projects by January 31, 2001.

PURPOSE OF ORDER

10. This NPDES permit amendment authorizes and regulates the pilot-scale streamflow augmentation discharge of treated wastewater at an alternate discharge location upstream to an existing 27-inch storm sewer along Singleton Road to Coyote Creek at latitude 37° 17' 47.8" and longitude 121° 49' 17.9", which enters that portion of San Francisco Bay lying south of the Dumbarton Bridge (hereinafter Lower South San Francisco Bay), all waters of the United States.

Project and Discharge Description

- 11. The Coyote Creek Streamflow Augmentation Pilot Project is an exploratory program designed to determine whether the release of recycled water into Coyote Creek during summer low-flow conditions can create and maintain stream conditions that enhance the aquatic environment and support coldwater fish species. Increased flows and cooler habitat conditions in Coyote Creek are expected to improve conditions for steelhead and Chinook salmon growth and survival. The planning of this project has involved the preparation of several technical documents that look at the feasibility and technical aspects of the project. These technical reports are:
 - 1. Coyote Creek Streamflow Augmentation Program: Candidate Site Descriptions (June 1999) documents the steps involved in selecting candidate sites for assembly and operation of the dechlorination/cooling facility;
 - 2. Coyote Creek Streamflow Augmentation Program: Final Project Description (March 2000) provides a concise description of the scope of the project both in terms of the basic layout of the

plant and facilities required and the efforts that will be conducted to demonstrate the

- 3. Coyote Creek Streamflow Augmentation Pilot Project: Final Water Quality Monitoring Report Coyote Creek Streamstow Augmentation Pilot Project: Final water Quality Monitoring Report for July - October 1999 (April 2000) summarizes baseline conditions in Coyote Creek prior to release of recycled mater including water and to real forms.
 - 4. Draft Coyote Creek Streamflow Augmentation Pilot Project: Initial Study/Mitigated Negative Draji Coyole Creek Streamflow Augmentation Pilot Project: Initial Study/Miligated Negative Declaration (May 2000) addresses the environmental impacts of the construction and operation of the Streamflow Augmentation Dilot Declaration

- 12. The Coyote Creek Streamflow Augmentation Pilot Project is a seasonal 3-year demonstration study decimed to better understand the anxironmental effects of using dechlorinated cooled recorded.
- The Coyole Creek StreamHow Augmentation Pilot Project Is a seasonal 3-year demonstration study designed to better understand the environmental effects of using dechlorinated, cooled recycled designed to better understand the environmental effects of using dechlorinated. Creek StreamHow Augmentation Pilot Project Is a seasonal 3-year demonstration study decided to better understand the environmental effects of using dechlorinated. designed to petter understand the environmental effects of using dechlorinated, cooled recycled water as a supplemental water supply for the enhancement and maintenance of the Counter water as a supplemental water supply for the enhancement is found to enhance the Counter during the day supplemental water supply for the enhancement and maintenance of the Counter water as a supplemental water supply for the enhancement and maintenance of the Counter water as a supplemental water supply for the enhancement and maintenance of the Counter water as a supplemental water supply for the enhancement and maintenance of the Counter water as a supplemental water supply for the enhancement and maintenance of the Counter water as a supplemental water supply for the enhancement and maintenance of the Counter water as a supplemental water supply for the enhancement and maintenance of the Counter water as a supplemental water supply for the enhancement and maintenance of the Counter water as a supplemental water supply for the enhancement and maintenance of the Counter water as a supplemental water supply for the enhancement and the following the day supplemental water supply for the enhancement and the counter water as a supplemental water supplemental water supply for the enhancement and the counter water wa water as a supplemental water supply for the enhancement and maintenance of the Coyote ecosystem during the dry summer low-flow months. If the project is found to enhance the Coyote ecosystem during the dry summer low-flow months. ecosystem auring the ary summer low-flow months. If the project is found to enhance the Coyote Creek environment, recycled water could be used to supplant future mandated reservoir releases and could be considered as an antice for other demanded expenses and in the receipt
 - could be considered as an option for other degraded streams and rivers in the region. 13. Facility. The Pilot Project Facility includes a connection to the South Bay Water Recycling (SBWR)

 transmission and distribution singling a connection to an evicting storm server for conveyance of transmission and distribution pipeline, a connection to an existing storm sewer for conveyance for contents and distribution pipeline, a connection to an existing storm sewer for contents and distribution pipeline, a connection to an existing storm sewer for contents and a connection to a senitor.
 - transmission and distribution pipeline, a connection to an existing storm sewer for sanitary sewer for cooled dechlorinated recycled water to Coyote Creek, and a connection to a sanitary sewer for discharge of water delivered to the site that does not make a suitable dechloring the site that does not make a suitable delivered to the site that does not make a suitable delivered to the site that does not make a suitable delivered to the site that does not make a suitable delivered to the site that does not make a suitable delivered to the site that does not make a suitable delivered to the site that does not make a suitable delivered to the site that does not make a suitable delivered to the site that does not make a suitable delivered to the site that does not make a suitable delivered to the site that does not make a suitable delivered to the site that does not make a suitable delivered to the site that does not make a suitable delivered to the site that does not make a suitable delivered to the site that does not make a suitable delivered to the site of the cooled dechlorinated recycled water to Coyote Creek, and a connection to a samilary sewer torthold discharge of water delivered to the site that does not meet permit requirements, plus dechlorination and cooling facilities. Appearing to the facilities and cooling facilities. discnarge of water delivered to the site that does not meet permit requirements, plus decility and cooling facilities. Approximately 2700 feet of SBWR pipeline will be extended with he confines of the former Singleton Landfill Decirled within the confines of the former Singleton Landfill Decirled within the confines of the former Singleton Landfill Decirled within the confines of the former Singleton Landfill Decirled within the confines of the former Singleton Landfill Decirled within the confines of the former Singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the confines of the former singleton Landfill Decirled within the c and cooling racinities. Approximately 2/00 reet of Shwk pipeline will be extended to the routed site located within the confines of the former Singleton Landfill. Recycled water will be rough through a dechlorination facility, then through exponential cooling toward and as needed through through a dechlorination facility, then through exponential cooling toward and as needed through through a dechlorination facility. site located within the confines of the former Singleton Landill. Recycled water will be routed through a dechlorination facility, then through evaporative cooling towers, and as needed, through through a dechlorination facility, then through evaporative changes to make the adjacent standard of mechanical chillers to meet design discharge temperatures, then discharged to the adjacent storm drain and through outfall #210 The dechlorination facility is contained within the dechlorination facility. mechanical chillers to meet design discharge temperatures, then discharged to the adjacent storm drain and through outfall #219. The dechlorination facility is contained within a 45-foot steriler and through outfall #219. The dechlorination highlights storage tank chemical feed sucted within a 45-foot steriler and consists of a liquid codium highlights storage tank chemical feed sucted within a 45-foot steriler. drain and inrough outfall #219. The decinonnation facility is contained within a 40-1001 sterior straight of a liquid sodium bisulfite storage tank, chemical feed system shipping container and consists of a liquid sodium bisulfite storage tank, transmission size in the transmission problem. snipping container and consists of a liquid sodium pisulfile storage tank, chemical reed system electricity generation turbine (powered by recycled water pressure in the transmission pipeling recording powered by recycled water pressure in the transmission pipeling recording powered by recycled water pressure in the transmission pipeling recording powered by recycled water pressure in the transmission pipeling recording provided by recycled water pressure in the transmission pipeling recording provided by recycled water pressure in the transmission pipeling recording provided by recycled water pressure in the transmission pipeling recording provided by recycled water pressure in the transmission pipeling recording provided by recycled water pressure in the transmission pipeling recording provided by recycled water pressure in the transmission pipeling recording provided by recycled water pressure in the transmission pipeling recording provided by recordi electricity generation turbine (powered by recycled water pressure in the transmission pipeling gasoline-powered backup generator, uninterruptable power supply battery, and an instrumentation of the property of the propert gasonne-powered backup generator, uninterruptable power supply battery, and an instrumental and control system. The 27-inch storm drain pipe is located beneath Singleton Road, and recyclar flows approximately 500 feet from the dechlorination facility to the current story. and control system. The Li-inch storm drain pipe is located beneath Singleton Koad, and recyl water flows approximately 500 feet from the dechlorination facility to the outfall on the west to the Courte Creek channel.
 - 14. Flow. The Plant has a treatment capacity of 167 mgd average dry weather influent flow. Dec. Water Dec. water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the discharge location by the South Bay Water is supplied from the Plant to the Bay Water is supplied from the Plant to the Bay Water is supplied from the Plant to the Bay Water is suppl water is supplied from the riant to the discharge location by the South Bay water rectangular transmission facilities, which have a total capacity of 50 mgd. The transmission facilities, which have a total capacity of 50 mgd. transmission facilities, which have a total capacity of 30 mgd. The dechlorination and cooling facilities locate
 - 15. Water Temperature Requirements. Current Basin Plan criteria for temperature require the receiving water temperature not be altered unless it can be demonstrated that I) and altered unless it can be demonstrated that I) and altered unless it can be demonstrated that I) and altered unless it can be demonstrated that I) and altered unless it can be demonstrated that I) and altered unless it can be demonstrated that I) and altered unless it can be demonstrated that I) and altered unless it can be demonstrated that I) and altered unless it can be demonstrated that I) and altered unless it can be demonstrated that I) and altered unless it can be demonstrated that I) and altered unless it can be demonstrated that I) and I altered unless it can be demonstrated that I) and I altered unless it can be demonstrated that I are the latered unless it can be demonstrated that I are the latered unless it can be demonstrated that I are the latered unless it can be demonstrated that I are the latered unless it can be demonstrated that I are the latered unless it can be demonstrated that I are the latered unless it can be demonstrated that I are the latered unless it can be demonstrated that I are the latered unless it can be demonstrated that I are the latered unless it can be demonstrated that I are the latered unless it can be demonstrated that I are the latered unless it can be demonstrated that I are the latered unless it can be demonstrated that I are the latered unless it can be demonstrated that I are the latered unless it can be demonstrated that I are the latered unless it can be demonstrated that I are the latered unless it can be demonstrated that I are the latered unless it can be demonstrated to the late water remperature requirements. Current pasm rian criteria for temperature require in receiving water temperature not be altered unless it can be demonstrated that 1) such altered unless it can be demonstrated that 1) receiving water temperature not be affect unless it can be defined unat 1) such affect the beneficial uses of the waterbody and 2) temperatures shall not be increase not affect the beneficial uses of the waterbody and 2).
 - 16. The Coyote Creek Streamflow Augmentation project is unique in that one of the ber supported by the project is to provide habitat suitable to coldwater fishes, which

		,) t
			•

.

restrictive temperature requirements for spawning, hatching, and rearing. Several detailed analyses have been performed to assure that the recycled water being released into the creek is cool enough to meet these strict temperature requirements. The resultant cooling system has been designed so that, even during the most extreme atmospheric conditions, the maximum temperature thresholds of the fish will not be exceeded.

17. The facilities will be designed and operated to provide the following temperatures:

Release Temperatures °F

Month	Target	Maximum		
May and October	57	60		
June	65	68		
July - September	68	71		

To meet these temperature requirements, cooling equipment is required to reduce the temperature of the recycled water prior to discharge to Coyote Creek by an average of between 6 °F and 12 °F, depending on the month. During mid-summer months (June to September) the recycled water must be cooled an average of 6 °F, and up to 9 °F for ten percent of the month. May and October require the greatest cooling effort. The average temperature decrease required to meet the biological criteria is 10 °F in May and 12 °F in October. For ten percent of the time in October it will be necessary to cool the recycled water by more than 14 °F.

Provision E.1 of the permit requires development of a monitoring program. The discharger intends to work with stakeholders to develop a monitoring program. Consistent with the provision, it is the intent of the discharger to include continuous monitoring of the ambient water temperature and the temperature of the recycled water in the monitoring program.

- 18. Operation Period and Design Flows. The nominal operating period of the pilot project is from May 1 to October 31 at a stable flow rate in Coyote Creek of 8 mgd.
- 19. Contingency Plans. The City has identified a series of options that will provide adequate water supply in the event of an emergency reduction or outage. Groundwater wells, a 12-inch potable water line at the site and reservoir releases would provide supplemental water in case of an emergency. The City is committed to providing sufficient water to avoid adversely affecting salmonid fish in Coyote Creek.

PUBLIC PARTICIPATION AND CEQA

20. Stakeholders. The Discharger, as part of the development of this project, has held multiple public meetings and worked with multiple stakeholder groups. The Discharger has used the input from these meetings to develop operational and monitoring criteria acceptable to stakeholders and for inclusion in the required environmental documents. The public meetings have been held at multiple

			1 4 t	•

convenient locations and at day and evening times to allow for maximum public participation. Public meetings for environmental enhancement projects began in April of 1998, with meetings on 4/3/98; 4/15/98; 4/27/98; 5/27/98; 6/19/98; 7/24/98; 8/27/9810/13/98; 11/30/98; 5/18/99; 6/8/00.

Stakeholder groups that have been represented at these meetings were Streams for Tomorrow, CLEAN South Bay, Guadalupe-Coyote Resource Conservation District, Santa Clara Valley Water District, California Department of Fish and Game, San Francisco Regional Water Quality Control Board, US Fish and Wildlife, Silichip Chinook, League of Women Voters, California Dept of Health Services, Santa Clara Valley Audubon Society, National Marine Fisheries Service, Silicon Valley Toxics Coalition, and Western Waters Canoe Club.

- 21. <u>CEQA</u>. The Discharger has complied with CEQA and adopted a mitigated Negative Declaration (ND), which by reference incorporates the 1992 South Bay Water Recycling EIR. The mitigated ND identifies project-specific impacts and incorporates monitoring and mitigation measures for the pilot streamflow augmentation project such that no significant adverse environmental impacts will occur.
- 22. The mitigated ND identified the elements of the biological monitoring program that would be conducted to document the overall performance of the streamflow augmentation program. Program performance was defined as the ability to meet design criteria, document permit compliance, and enhance aquatic habitat and use of the creek by biota.
- 23. The major elements of the monitoring program outlined in the ND and associated technical reports address: surface and groundwater quality, nutrients, benthic invertebrates, steelhead and chinook salmon fish monitoring, attraction flows, resident fish populations (including potential impacts on fish from endocrine disruptor compounds), and duckweed, emergent, and periphyton aquatic vegetation growths. The Provisions require the discharger to develop detailed monitoring workplans for each of these elements for review and approval by the Executive Officer in advance of start-up of the pilot project.
- 24. The Coyote Creek Streamflow Augmentation Project would help implement actions for water reuse and aquatic resource improvements contained in the Comprehensive Conservation and Management Plan, adopted by the San Francisco Estuary Project in March 1993.

BASIN PLAN

- 25. <u>Basin Plan</u>. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (hereinafter the "Basin Plan") on June 21,1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resources Control Board (SWRCB) and the Office of Administrative Law on July 20, 1995 and November 13, 1995, respectively. The Basin Plan identifies beneficial uses and water quality objectives for waters of the state in the Region, including surface waters and groundwaters. The Basin Plan also identifies effluent limitations and discharge prohibitions intended to protect beneficial uses. This Order is consistent with the plans, policies and provisions of the Board's Basin Plan.
- 26. <u>CTR/SIP</u>. The California Toxics Rule (CTR) was promulgated as final on May 18, 2000 by USEPA, establishing numeric water quality objectives for the first time for the Lower South Bay. The State

() () () () () ()

Implementation Plan (SIP) was approved by the SWRCB and OAL March 2, 2000 defining how CTR values were to be implemented in establishing effluent limitations.

- 27. <u>Beneficial Uses</u>. The existing and potential beneficial uses of Coyote Creek recognized in the Basin Plan are:
 - Cold Freshwater Habitat
 - Fish Migration
 - Preservation of Rare and Endangered Species
 - Water Contact Recreation (potential)
 - Noncontact Water Recreation
 - Fish Spawning
 - Warm Freshwater Habitat
 - Wildlife Habitat

Steelhead trout reproduce in tributaries of Coyote Creek and use the mainstem of Coyote Creek for migration passage and juvenile rearing, and steelhead trout have been protected as threatened under the federal Endangered Species Act since the last Basin Plan update. Chinook salmon (also protected as a candidate species) are known to also migrate into and spawn in Coyote Creek.

- 28. <u>Downstream Beneficial Uses</u>. The beneficial uses of San Francisco Bay, South Bay (south of the Dumbarton Bridge) and contiguous water bodies are:
 - Ocean, Commercial, and Sport Fishing
 - Estuarine Habitat
 - Industrial Service Supply
 - Fish Migration
 - Navigation
 - Preservation of Rare and Endangered Species
 - Water Contact Recreation
 - Noncontact Water Recreation
 - Shellfish Harvesting
 - Fish Spawning (potential use)
 - Wildlife Habitat
- 28. <u>Discharge Prohibitions</u>. The discharge location is contrary to the State Water Resources Control Board Bays and Estuaries Policy (1974), which prohibits discharges south of the Dumbarton Bridge and to one of the Discharge Prohibitions identified in the Basin Plan. The 1995 Basin Plan states, in part (Table 4-1):

"It shall be prohibited to discharge:

1. Any wastewater which has particular characteristics of concern to beneficial uses at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1, or into any non-tidal water, dead-end slough, similar confined waters, or any immediate tributary thereof."

				, .,
,				
	,			
			*	

- 29. <u>Prohibition Exceptions</u>. The Basin Plan states (at page 4-5) that exceptions to the above prohibitions will be considered for discharges where:
 - "a. An inordinate burden would be placed on the Discharger relative to the beneficial uses protected and an equivalent level of environmental protection can be achieved by alternate means, such as an alternative discharge site, a higher level of treatment, and/or improved treatment reliability; or
 - b. A discharge is approved as part of a reclamation project; or
 - c. It can be demonstrated that net environmental benefits will be derived as a result of the discharge."
- 30. Plant Reliability Consideration. The Basin Plan further states (at page 4-5) that:

"In reviewing requests for exceptions, the Regional Board will consider the reliability of the Discharger's system in preventing inadequately treated wastewater from being discharged to the receiving water and the environmental consequences of such discharges."

The Plant provides a high level of treatment and the pilot streamflow augmentation project provides an equivalent level of environmental protection relative to discharge of the pilot project flows at the Artesian Slough discharge location. The pilot streamflow augmentation has been evaluated using all feasible scientific evaluation approaches to identify the potential for beneficial and adverse environmental impacts. This Order allows a pilot streamflow augmentation project to be implemented to further evaluate the environmental benefits of streamflow augmentation. This Order provides for immediate cessation of discharge if particular environmental impact criteria are met.

- 31. Reclamation Project. The discharge is part of the South Bay Water Recycling Program.
- 32. <u>Net Environmental Benefit</u>. The Coyote Creek Streamflow Augmentation Pilot Project provides a net environmental benefit by providing flows that have consistently good water quality during summer low-flow ambient creek conditions. The augmented flows will:
 - 1. Flush pooled contaminants from the creek,
 - 2. Improve overall water quality by diluting existing creek toxicants (e.g., pathogens and metals),
 - 3. Provide cool flowing water that will produce a habitat found attractive by coldwater fishes for migration, spawning, and nursery purposes,
 - 4. Provide acceptable habitat for endangered and protected salmonid species,
 - 5. Provide consistently flowing water that will provide attractive habitat for benthic macroinvertebrates and wildlife,
 - 6. Improve aesthetics by diluting and flushing pollutants downstream, making it more attractive for water recreation, and

7. Reduce riparian dry-out and mortality caused by summer low-flow creek conditions and enhance the riparian corridor.

These conditions and resultant environmental benefits of releasing recycled water into Coyote Creek are sufficient to grant an exemption from the Basin Plan 10:1 dilution prohibition.

- 33. The proposed project, as part of the Board approved SBAP, was designed to address salt marsh conversion in both short-term and long-term ways. The short-term goals were to move water upstream and release it into the Creek, anticipating some loss to evaporation. It is also anticipated that this small amount of flow will not, by itself, impact the salt marsh at the mouth of Coyote Creek. Coyote Creek currently carries this amount of flow during dry weather months with no documented impact to the salt marsh.
- 34. Long-term ways of addressing the salt marsh conversion issue are the advancement of the state of knowledge concerning recycled water and its use as a water supply for fish and wildlife. Understanding and developing the use of recycled water for future applications can potentially reduce the amount of water that is ultimately released to the south bay salt marshes.

BASIS FOR PERMIT LIMITS

- 35. <u>Basin Plan</u>. The Basin Plan specifies water quality objectives for temperature, dissolved oxygen, pH, un-ionized ammonia, turbidity, and total dissolved solids. These objectives are incorporated in this Order as receiving water limits.
- 36. Reasonable Potential Analysis. Using the method described in the State Implementation Plan (SIP) the Discharger has performed a Reasonable Potential Analysis (RPA) to determine which constituents in the CTR require effluent limits in the City's permit amendment for Streamflow Augmentation in freshwater Coyote Creek. Until the CTR was adopted there were no water criteria in the Basin Plan applicable to the South Bay. The CTR/SIP based Reasonable Potential Analysis for the discharge to Coyote Creek found no constituents were detected between 1997 and 1999 at levels greater than the CTR freshwater criteria. The limits in Order 98-052 are as low or lower than water quality objectives for the protection of beneficial uses for all criteria that are applicable to the streamflow augmentation pilot project. Therefore, the existing Permit effluent limits for toxic substances are not repeated in this Order.

As specified in 40 CFR 122.44(d) (1) (i), permits are required to include limits for all pollutants "which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard." Using the method described in the SIP, Regional Board staff and the discharger have analyzed the effluent data to determine if the discharges had reasonable potential to cause or contribute to an exceedance of a State water quality standard ("RP Analysis"). The RP analysis compares the effluent data with the Basin Plan, CTR, USEPA's NTR, 1998, and USEPA's Quality Criteria for Water, 1986 (Gold Book).

A complete RP analysis cannot be performed on the discharger's effluent because there is insufficient ambient, background data to determine if an effluent limitation is needed. In accordance with the SIP, the discharger shall obtain ambient, background water samples for metals and organic

priority pollutants upstream from the facility. After the background information is gathered, the RP analysis results in the RPA will be performed and the permit responded to include applicable RP analysis. priority pollutants upstream from the facility. After the background information is gathered, the RPA will be performed and the permit reopened to include applicable RP analysis results in the permit.

a. Reasonable Potential Determination The RP analysis involves identifying the observed maximum hazed on the effluent nollutant concentration in the effluent (MEC) for each concentration in the effluent permit.

a. Reasonable Potential Determination The RP analysis involves identifying the observed maximum based on the effluent of the sample results are pollutant concentration in the effluent (MEC) for each constituent, the sample results are concentration data for the past three years (1997 through 1999). If all of the sample results are pollutant concentration in the effluent (MEC) for each constituent, based on me etiluent concentration in the effluent (MEC) for each constituent, based on me etiluent are some sample results are concentration data for the past three years (1997 through 1999). If all of the sample results are concentration data for the past three years (1997 through 1999) and the lowest detection limit is below the annicable criteria. concentration data for the past three years (1997 through 1999). If all of the sample results are nondetectable and the lowest detection limit is below the applicable criteria, the lowest detection limit is used as the MFC

In accordance with the SIP, section 1.3, the RP analysis for all constituents is based on zero dilution.

The lowest WOO is adjusted for all hardness and translator data. The Resin Dian WOOs in Table. In accordance with the SIP, section 1.3, the RP analysis for all constituents is based on zero dilution.

The Basin Plan WQOs in Table

The lowest WQO is adjusted for pH, hardness and translator data. The Basin Plan Therefore the The lowest WQO is adjusted for pH, hardness and translator Raidge (page 3.5 of the Racin Plan). Therefore the 3.3 and 3.4 do not apply south of the Dumbarton Raidge (page 3.5 of the Racin Plan). limit is used as the MEC.

Ine lowest WQU is adjusted for pH, hardness and translator data. The Basin Plan WQUs in Table 3-3 and 3-4 do not apply south of the Dumbarton Bridge (page 3-5 of the Basin Plan). The freehouster criteria are the applicable criteria used in the DDA. The freehouster criteria are the applicable criteria used in the DDA. 2-3 and 3-4 do not apply south of the Dumbarton Bridge (page 3-3 of the Basin Flan). Incretore, the The freshwater criterion maximum.

CTR criteria are the applicable criteria used in the RPA. The freshwater criterion (CCC) and human health concentration (CMC) freehwater criterion continuous concentration (CMC) freehwater criterion. concentration (CMC), freshwater criterion continuous concentration (CCC) and human health

criterion for consumption of organisms only in Table b (1) were used.

Freshwater aquatic life criteria for metals that were expressed as a function of 100 mg/L total hardness (cadmium conner abronium III lead nickel silver and zinc) were edineted for site rieshwaier aquatic nie criteria for metals that were expressed as a function of lou mg/L total hardness (cadmium, copper, chromium III, lead, nickel, silver and zinc) were adjusted for site hardness (cadmium, copper, chromium III, lead, nickel, silver and zinc) were adjusted for site hardness data. The Discharges and zince in the magnitude of the property data. naroness (caomium, copper, chromium III, lead, nickel, silver and zinc) were adjusted for different specific hardness data. The Discharger sampled 7 This chiding documented in the City of Canada Specific hardness data. The Discharger sampled 7 This chiding events from July through October 1000 specific naraness data. The Discharger sampled / sites in the receiving water during four different sampling events from July through October 1999. This study is documented in the Discharger Environmental Enhancement Discharger Court Court Court Street Court Sampling events from July inrough October 1999. Ims study is accumented in the City of San John Environmental Enhancement Program Coyote Creek Streamflow Augmentation The overce hards.

Water Ouglin, Maniforing Papart For Library October 1999. Environmental Ennancement Program Coyote Creek Streamflow Augmentation Pilot Project Fin.

Water Quality Monitoring Report For July - October 1999 (April 2000).

Water Quality Monitoring Report For July - 282 yan and the minimum values ranged from 202 against the seven sites ranged from 202 water Quality Monitoring Report For July – Uctober 1999 (April 2000). The average hardn values at the seven sites ranged from 202 – 383 ug/L and the minimum values ranged report values at the seven sites ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values ranged from 202 – 383 ug/L and the minimum values at the seven sites ranged from 202 - 383 ug/L and the minimum values ranged from 19 and the minimum hardness value of 191 ug/L, from the CTD and the CTD an January Line most conservative minimum naroness value of 191 ug/L, from the CTR criteria location located upstream from the proposed discharge point, was used to adjust the CTR criteria.

The CTR criteria are expressed as dissolved criteria. The SIP allows the use of applicable conversion factors to express the criterion as total recoverable if a site-specific translator has conversion factors to express the criterion as total recoverable if a site-specific translator has conversion factors to express the criterion as total recoverable if a site-specific translator has conversion factors to express the criterion as total recoverable if a site-specific translator has conversion factors to express the criterion as total recoverable if a site-specific translator has conversion factors to express the criterion as total recoverable if a site-specific translator has conversion factors. The CIR criteria are expressed as dissolved criteria. The Sir allows the use of applicable conversion factors to express the criterion as total recoverable if a site-specific translator is conversion factors to express the criterion as total recoverable. peen determined. For those constituents were an EFA conversion factor is not available conservative one to one conversion from dissolved to total criteria is assumed. Where applications conversion from dissolved to total criteria is assumed. conservative one to one conversion from dissolved to total criteria is assumed. Where applic freshwater acute criteria conversion factor was applied to the CMC and the freshwater criteria conversion factor was applied to the CMC and load conversion factor was applied to the CMC. resnwater acute criteria conversion factor was applied to the CCC. (The cadmium and lead conversion factor was applied to the CCC.) been determined. also hardness dependant.

cadmium and lead conversion factors.)

The 127 CTR constituents and tributyltin were analyzed. Although the majority (55 constituents and tributyltin were analyzed. DB analysis and tributyltin were analyzed. the organic MECs were below the lowest criteria, the RP analysis was considered the organic MECs were below the lowest criteria. because there were no ambient background concentration results to verify the received the receiv b. RPA Data and Analysis.

concentrations are below the water quality criteria. Thirty of the constituents had no RP and no effluent limits are required.

Twenty seven constituents had incomplete RPAs because all of the results were no I wenty seven constituents nau incomplete repaires and of the SIP requires additions the lowest detection limit was above the lowest criteria.

			, ,

these constituents instead of a water quality based effluent limit. However, it should be noted that for these constituents current analytical methods can not achieve detection limits lower than the lowest criteria.

The remaining 16 constituents were considered incomplete RPAs because there was no effluent data and/or background data to complete the RPA.

- 37. Interim Effluent Limits. The RPA showed there were no constituents with RP that require interim effluent limits for the Pilot Streamflow Augmentation Project. The only effluent limits for toxic constituents that apply are the effluent limits in Order 98-052.
- 38. <u>CEQA</u>. This Order serves as an NPDES permit, issuance and reissuance of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Code. In addition, the City of San Jose certified a mitigated Negative Declaration for this pilot project on September 27, 2000.5
- 39. <u>Public Notice</u>. The Discharger and interested agencies and persons have been notified of the Board's intent to reissue the NPDES permit for this discharge and have been provided an opportunity to submit their written comments and appear at the public hearing.
- 40. <u>Public Hearing</u>. The Board, at a properly noticed public meeting heard and considered comments pertaining to the discharge.

IT IS HEREBY ORDERED, that the Discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act as amended and regulations and guidelines adopted thereunder, shall comply with the following amendments to Order No. 98-052:

A. DISCHARGE PROHIBITIONS

1. The Discharger is granted an exception to discharge prohibitions 1 through 3 of Order No. 98-052 for discharge at the specified alternate discharge location in Coyote Creek for purposes of a pilot streamflow augmentation demonstration project, based on a finding of net environmental benefit, conditioned upon compliance with amended B. Effluent Limitations and E. Provisions below.

B. EFFLUENT LIMITATIONS

The term "effluent" in the following limitations means the treated wastewater effluent from the Discharger's wastewater treatment facility, as discharged to receiving waters. With the exception of chorine residual and temperature, attainment of all effluent limits shall be evaluated in Plant effluent per Order 98-052. Chlorine residual and temperature shall be measured at the point of discharge to Coyote Creek.

1. Temperature. At no time shall the discharge exceed the ambient creek temperature for a period exceeding 12 hours, unless the discharge is equal to or less that 60° F in May and October, 68° F in

			• • •	•
	,			4
		,		

June, 71° F in July through September. Target release temperatures¹ shall be 57° F in May and October, 65° F in June, and 68° F in July through September.

C. RECEIVING WATER LIMITATIONS

- 1. Temperature. The discharge shall not cause the receiving water temperature to increase by more than 5° F for more than one hour.
- 2. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:
 - A. Floating, suspended, or deposited macroscopic particulate matter, or foam;
 - B. Bottom deposits or aquatic growths;
 - C. Alteration of turbidity, or apparent color beyond present natural background levels;
 - D. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
 - E. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
- 3. The discharge shall not cause the following limits to be exceeded in waters of the State:

Constituent	Limit
A. Dissolved Oxygen	7.0 mg/L minimum. Median of any three consecutive months shall not be less than 80% saturation. When natural factors cause lesser concentrations than those indicated above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
B. Dissolved Sulfide	0.1 mg/L maximum.
С. рН	pH shall not be depressed below 6.5 nor raised above 8.5. The discharge shall not cause a pH change that is 0.5 greater than normally occurs.
D. Un-ionized Ammonia	0.025 mg/L as N, annual median. 0.4 mg/L as N, maximum.

¹ For the purpose of this pilot project the target release temperatures are considered a design and operational factor and not an enforceable effluent limitation. The Discharger shall take all reasonable actions to return operating temperatures to the target numbers during any excursion above these values.

	Waters shall be free of changes in turbidity that cause Waters shall be free of changes in turbidity changes Turbidity changes Turbidity changes Turbidity changes a 10 percent light penetration The percent han a 10 percent light penetration The percent han a 10 percent light penetration
	Waters shall be free of changes in turbidity that cause Waters shall be free of changes in turbidity changes. Turbidity changes Turbidity changes In turbidity that cause Turbidity that cause Turbidity changes In turbidity changes Turb
	in turbluity situ changes
4	changes in Turbially America
	he free of orneficial uses. Light penetration
•	shall be haffect believe percent light meater than
	Waters adversely and a 10 portunidity is greater
	auisance of actural main manufactural fullottes
Turbidity	number of the state of the stat
E. Turbidity	I that the archibitos
	increase all P
1	50 NTU. sot cause salinity condition to stuarine
	50 141 cause Samuly impact Delia estuarine
_	harge shall not adversely martion, and established
	that result in gradient that result increase are prohibited where here increase are prohibited where here increases are prohibited where h
	The at or Alviso Store and 10P
(TDS)	Creek of 1. fish migrand
F. Salinity (TDS)	The Discharge shall not cause salinity conduction, and estuarine Creek or Alviso Slough that adversely impact beneficial uses, and creek or Alviso Slough that adversely impact beneficial uses, and creek or Alviso Slough that adversely impact beneficial uses, and creek or Alviso Slough that adversely impact beneficial uses, and creek or Alviso Slough that adversely impact beneficial uses, and creek or Alviso Slough that adversely impact beneficial uses, and creek or Alviso Slough that adversely impact beneficial uses, and creek or Alviso Slough that adversely impact beneficial uses, and creek or Alviso Slough that adversely impact beneficial uses, and creek or Alviso Slough that adversely impact beneficial uses, and creek or Alviso Slough that adversely impact beneficial uses, and creek or Alviso Slough that adversely impact beneficial uses, and creek or Alviso Slough that adversely impact beneficial uses, and creek or Alviso Slough that adversely impact beneficial uses.
/1.	parties of the
	habitat.
	might to Secure original Board
	groved pursuant the Region metation
	habitat. habitat. Section 303 of the particular to Section 303 of the Section 303 of the particular to Section 303 of the Section 303
	aromulgated the hasis lot actives and the

4. If applicable water quality standards are promulgated or approved pursuant to Section 303 of the LI application water quality standards are promulgated or approved pursuant to the Regional Board Clean Water Act, or amendments thereto that supersede the basis for this permit, the Regional Board will revise or modify this Order in accordance with the ambiguity chief order in accordance with the ambiguity of the provider of modify this Order in accordance with the ambiguity of the provider of modify this Order in accordance with the ambiguity of the provider of the provid will revise or modify this Order in accordance with the applicable objectives and implementation

1. Monitoring Program. The Coyote Creek Streamflow Augmentation Project requires a monitoring program that is designed to assess whether or not the stated project objectives are being met.

Discharger shall work with stakeholders through the Santa Clara Basin Watershad Management Discharger shall work with stakeholders through the Santa Clara Basin Watershed Management Initiative and the Degional Board staff to obtain their approval and finalization of a monitoring Initiative and the Regional Board staff to obtain their approval and finalization of a monitoring and the Regional Board staff to obtain their approval and finalization of a monitoring program accomplished to the Executive Officer addressing the elements described in Finding 22 prior to the Executive Officer addressing the elements described in Finding 22 prior to the Executive Officer addressing the elements described in Finding 22 prior to the Executive Officer addressing the elements described in Finding 22 prior to the Executive Officer addressing the elements described in Finding 22 prior to the Executive Officer addressing the elements described in Finding 22 prior to the Executive Officer addressing the elements described in Finding 22 prior to the Executive Officer addressing the elements described in Finding 22 prior to the Executive Officer addressing the elements described in Finding 22 prior to the Executive Officer addressing the elements described in Finding 22 prior to the Executive Officer addressing the elements described in Finding 22 prior to the Executive Officer addressing the elements described in Finding 22 prior to the Executive Officer addressing the elements described in Finding 22 prior to the Executive Officer addressing the elements described in Finding 22 prior to the Executive Officer addressing the elements described in Finding 22 prior to the Executive Officer addressing the elements described in Finding 22 prior to the Executive Officer addressing the elements described in Finding 22 prior to the Executive Officer addressing the elements described and the Executive Officer addressing the elements described and the Executive Officer addressing the elements described and the elements desc E. PROVISIONS program acceptable to the Executive Officer addressing the elements described in Finding 23 prior to program acceptable to the Executive Officer addressing the elements described in Finding 23 prior to program acceptable to the Executive Officer addressing the elements described in Finding 23 prior to program acceptable to the Executive Officer addressing the elements described in Finding 23 prior to program acceptable to the Executive Officer addressing the elements described in Finding 23 prior to program acceptable to the Executive Officer addressing the elements described in Finding 23 prior to program acceptable to the Executive Officer addressing the elements described in Finding 23 prior to program acceptable to the Executive Officer addressing the elements described in Finding 23 prior to program acceptable to the Executive Officer addressing the elements described in Finding 24 prior to program acceptable to the Executive Officer addressing the elements described in Finding 25 prior to program acceptable to the Executive Officer addressing the elements described in Finding 25 prior to program acceptable to the Executive Officer addressing the elements described in Finding 25 prior to program acceptable to the Executive Officer addressing the elements described in Finding 25 prior to prio program acceptable to the Executive Officer addressing the elements described in Finding 23 prior to the Executive Officer addresses of monitoring shall be conducted initiating release of recycled water into Coyote Creek. Three types of monitoring shall be conducted initiating release of recycled water into Coyote Creek. Continuous in situ field measurements to monitor the effectiveness of the design, operation, a

maintenance of the Proposed Project. Hydrologic, water quality, and meteorological parameters is maintenance of the Proposed Project. be measured to compare design and operational characteristics and provide real-time data potential acute effects on biota (e.g., changes in temperature or water quality that are deleterious) Field sampling events to document the effectiveness of the Proposed Project. Field surveys w

conducted at selected locations before implementing the project and at regular intervals (mo during the operational period) during the course of the project. The objective of this sampling will be to document the long-term effects of the project. Seven sites were selected and drymonitoring commenced in July 1999 to establish baseline creek water quality conditions.

Sampling within the immediate study area and at other locations to provide data that will Proposed Project with the Fisheries and Aquatic Habitat Collaborative Effort (FAHCE) a rioposed rioject with the risheres and raquate manifestative to be coordinated.

Santa Clara basin watershed activities. The monitoring plan needs to be coordinated. contingency plan from Provision E.2. and with requirements of Provisions E.5 and E.6.

The Coyote Creek Streamflow Augmentation Project requires a written contingency F states that in the event that any facilities malfunction, backup systems would be many facilities malfunction, backup systems would be many facilities malfunction. ensure continuation of project releases deemed essential to the well being of the fish dependent on the discharge. The Discharger has identified a series of groundwater well

		i.	

the proximity of the release location that could be used as a backup water supply in the unlikely event of a long-term plant failure or malfunction. In addition, the 12-inch potable water line at the proposed release point near the Singleton Landfill could supply approximately 2 mgd of water to supplement the emergency supply from the wells. It is likely that the potable water would have to be processed through the dechlorination station to remove the residual chlorine concentration. In addition, the contingency plan must address criteria for ceasing discharge of recycled water to Coyote Creek. The Discharger shall submit a written contingency plan for Executive Officer review and approval prior to initiating release of recycled water into Coyote Creek. The contingency plan needs to be coordinated with the monitoring plan from Provision E.1. and with requirements of Provisions E.5 and E.6.

- 3. Initiating Discharge. Discharge may commence in the summer of 2001 at such time that the Executive Officer approves a Discharger certification that the dechlorination and cooling facilities are fully and reliably operational and conditions of E.1 and 2 are met. Discharge may commence in subsequent years as approved by the Executive Officer. The Executive Officer shall consider monitoring data and other information to determine that discharge will continue to provide a net environmental benefit.
- Establishing Discharge Rates. The Discharger has conducted pre-discharge studies that identified the appropriate discharge rate for habitat enhancement. The discharge shall commence at a rate such that total streamflow is increased, and total streamflow could be increased thereafter until the target streamflow is achieved. Changes in discharge rates, such as during system startup or shutdown, would be accomplished by using a ramping rate (changes in streamflow over time) that avoids the potential for reducing flows so quickly that fish become stranded. Implementation is designed for ramping rates of 2 cfs per 8-hour period. Cooling operation will be started by allowing recycled water to flow through the cooling towers. Based on the discharge temperature from the cooling towers, the flow would either bypass the chillers (if the water is cool enough) or be diverted through the chillers to further reduce temperature to the target release temperature. However, when first starting, the flow would be diverted into the sanitary sewer system until the flow temperature is stabilized. When the desirable temperature is achieved, the cooled recycled water would be released to Coyote Creek at incremental increases in flow rates of 2 cfs per 8-hour period. Similarly, the shutdown of the flow from the cooling system will be accomplished in 2 cfs increments per 8-hour period. This rate of increase and decrease of the release to the stream would allow time for fish and wildlife to move to or from the stream edges or the preferred habitat depths.
- 5. Immediate Monitoring Data Review. In the first two years of project operation, data from the self-monitoring program shall be evaluated periodically from the time discharge is initiated until one week after the target or maximum discharge rate is attained. Discharge shall be adjusted or ceased immediately as necessary if effluent limitations are not attained. The discharger shall, as part of the monitoring program in Provision E.1, develop an approach to report all monitoring data in a timely manner, especially effluent and receiving water temperature data that allows for timely decisions regarding cessation of the discharge. If discharge is ceased, the Executive Officer may approve resumption of discharge based on information that shows that beneficial uses will be protected and the above criteria for ceasing discharge are not expected to recur.

					• "	, '
		•				
			÷			

- 6. Cease Discharge. Discharge shall cease as described in E.2 and 5 above or when base flow (streamflow exclusive of recycled water discharge) returns to the target level after 31 October each year.
- 7. Standard Provisions. The Discharger shall comply with all items in the attached "Standard Provisions, Reporting Requirements, and Definitions" dated August 1993.
- 8. NPDES Permit. This Order shall serve as a National Pollutant Discharge Elimination System (NPDES) permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after the date of its adoption provided the Regional Administrator, EPA, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.
- 9. Order Expiration. This Order expires on June 17, 2003. The Discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days before this expiration date as application for reissuance of waste discharge requirements.

I, Lawrence P. Kolb, Acting Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on October 18, 2000.

LAWRENCE P. KOLB
Acting Executive Officer

Laurence P. KM

- 6. If the results of the monitoring required in Provision 2 above for Stations SB03, SB06, SB07, SB08, SB09, and SB10 show that mean dissolved nickel concentrations have risen to 8.0 ug/l, the Dischargers shall implement Phase 2 actions described in Finding 11 and report on the Phase 2 actions in the annual report required by Provision 1.
- 7. Provision 6 of Order No. 98-052, Provision 4 of Order No. 98-053, and Provision 5 of Order No. 98-054 are hereby amended to read as follows:

Watershed Management Initiative Support

The Discharger shall participate with the Regional Board staff, other Dischargers in the Lower South Bay, representatives of the public and other concerned parties as described below in carrying out the Santa Clara Basin Watershed Management Initiative (WMI) tasks set forth in a workplan to be approved by the Executive Officer to be developed pursuant to Provision 8 of this Order aimed at assisting the Regional Board select and adopt site-specific water quality objectives for copper and nickel. In addition to conducting the work set forth in Provision 8, the Discharger shall participate in such a manner by attending through its representatives meetings of the Core Group of the WMI, as well as meetings of the Bay Modeling and Monitoring Subgroup and the Regulatory Subgroup. The Discharger shall review and comment upon all technical and other proposals developed by the foregoing groups of the WMI that are related to surface water quality in the Lower South Bay. These technical proposals include, but are not limited to: Track and encourage investigations of uncertainties in the Lower South Bay impairment decision (CB-17); Track and encourage investigations on factors influencing copper and fate and transport (CB-18); and Copper Conceptual Model update (CB-20), from the Copper Action Plan; and Track and Encourage a watershed model linked to a process oriented Bay model (NB-7) from the Nickel Action Plan. The Discharger shall make technical information that is considered public information, in its possession available to the appropriate groups of the WMI necessary to develop and conduct the work effort set forth in the workplan required per Provision 8 of this order. The Discharger shall report to the Executive Officer every six months, beginning January 31, 2001 as part of the watershed program status update, describing its efforts for the prior six months in cooperating with the WMI. The Dischargers shall, in conjunction with the BMM and/or Regulatory Subgroups, schedule semi-annual (twice per year) meetings to discuss tracking efforts and specific efforts that could be undertaken to look for opportunities to encourage specific activities, assign responsibility to execute such encouragement activities, and report on the implementation of previously assigned activities.

8. Provision 7 of Order No. 98-052 is deleted in its entirety. A new Provision is hereby added to each Discharger's permit as follows:

			ř	, •

Technical Assistance to Support the Adoption of Site-Specific Objectives for Copper and Nickel

In support of the WMI's overall goal of developing and implementing site-specific water quality objectives for copper and nickel in the Lower South Bay, the Discharger shall participate with the other POTW Dischargers in the Lower South Bay to conduct the following work to assist the regulatory community to make a final selection of final site-specific objectives for copper and nickel in the Lower South San Francisco Bay and to issue waste discharge requirements to the treatment plants discharging into the Lower South Bay based thereon:

Draft technical and environmental support documents (FED) and summaries thereof for consideration and potential adoption by the Regional Board which are sufficient to enable the Regional Board to select final site-specific objectives for both copper and nickel from within the respective ranges specified in Finding 7 of this Order.

Draft analyses and plans as the Regional Board may need to consider and adopt pursuant to Sections 13241 and 13242 of the California Water Code, as appropriate to enable the Regional Board to comply with the requirements of such Sections in the adoption of site-specific objectives for copper and nickel.

Such further draft analyses and plans as the Regional Board may need to consider and adopt in order to comply with any other requirements of California law in order to adopt final site-specific objectives for copper and nickel and to issue waste discharge requirements to the treatment plants discharging into the Lower South Bay based on such objectives. Such further analyses and plans will be limited to the Regional Board's initial adoption of site specific objectives and waste discharge requirements and not for Regional Board actions in response to challenges of its determinations.

The Discharger shall develop and submit through the Bay Modeling and Monitoring Subgroup of the WMI a schedule and workplan, as part of an updated BMM workplan, to conduct the above work and prepare the above special studies that are acceptable to the Executive Officer within 60 days of adoption of this Order. Such workplan shall provide for a time schedule that will enable the Board to take final action to adopt the final site-specific objectives in as short a time as practicable, but in no case later than three (3) years from the date of adoption of the Order containing this Provision. Such workplan, when approved, shall become the workplan of the WMI. The Discharger shall report to the Executive Officer every six months, beginning July 31, 2001 as part of the watershed program status update (or in the annual and semiannual Pretreatment Program Reports), describing its efforts for the prior six months.

- 9. As part of the report of waste discharge required 180 days prior to permit expiration for reissuance of the NPDES permits, the Dischargers shall submit revised Copper and Nickel Action Plans. The Plans shall be revised as necessary based on initial data collected and information gained from the initial implementation of the Plans.
- 10. This Order expires on June 17, 2003.

I, Lawrence P. Kolb, Acting Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on October 18, 2000.

LAWRENCE P. KOLB
Acting Executive Officer

Coursen P.KH



Appendix A (Based on Table 4-1 of the Nickel Action Plan) Summary of POTW Baseline Nickel Control Actions

Baseline Number	Copper Action Plan Reference	Description	Lead Party	Implementation Time- Frame	Implementation Mechanism	Source (s) addressed; potential effectiveness
NB-3	(Same as CB-13)	Track POTW Pretreatment Program efforts and POTW loadings	POTWs	Ongoing	POTW NPDES Permits (reporting part of Annual SMR and Pretreatment Program reports)	Tracking effort
NB.4	(Same as CB-14)	Track and encourage water recycling efforts	POTWs	Ongoing	Reporting through POTWs Annual Water Recycling report and/or Annual SMR	POTW; cost- benefits need to be evaluated as part of considering additional efforts
NB-6	(Same as CB-19)	Continue to promote industrial water use and reuse efficiency. These programs may include workshops, outreach, incentives, or audits.	POTWs	Ongoing	POTW Permits	Unknown
NB-7		Track and encourage a watershed model linked to a process oriented Bay model	POTWs/SCVURPPP	Ongoing	Portw & SCVURPPP Permits	NA (could allow for better evaluation of water quality changes related to actual/theoretical source reductions; the cost-benefits need to be evaluated as part of considering additional efforts

Annual Reports of NPDES permitted agencies (POTWs and SCVURPPP) will contain a summary of the status of all NAP items.

BMM/Reg. Subgroup Final Revision made by BMM/RS August 23, 2000 Appendix-A prepared to reflect only POTW Control Actions

	(B Summary	Appendix A lased on Table 4-2 of the Nickel Action Plan) of Potential POTW Phase I Nickel Control Measures	ction Plan) Control Measures	
Phase I Number (CAP Reference)	Description	Lead Party	Implementation Mechanism	Source (s) addressed; potential effectiveness
(I-7)	Develop Phase II Implementation Plan for POTW expansion of water recycling	POTWs – convene powers to be (see Finding 12 of the POTW permit amendment)	POTW Permits	POTW; cost-benefits need to be evaluated as part of considering additional efforts
(I-10)	Evaluate results of tracking industrial virtual closed-loop wastewater efficiency measures and develop potential actions	POTWs – convene powers to be (see Finding 12 of the POTW permit amendment)	POTW Permits	Unknown at current time
(f-11)	Develop Phase II Implementation Plan for POTW process optimization	POTWs – convene powers to be (see Finding 12 of the POTW permit amendment)	POTW Permits	Unknown at current time
NI-3	Develop a Phase I Plan including an evaluation of the results Baseline actions	RWQCB – convene powers to be (see Finding 12 of the POTW permit amendment)	CWC regulatory mechanisms	Unknown at current time

BMM/Reg. Subgroup
Final Revision made by BMM/RS August 23, 2000
Appendix-A prepared to reflect only POTW Control Actions

A/Reg Subgroup
Approved for Transmittal to RWQCB on August 23, 2000
Final Revision made by BMM/RS August 23, 2000
Appendix A – prepared to reflect only POTW Control Actions (Includes Urban Runoff Permit Re-issuance Work Group Input)

	(Based Summary of P	Appendix A (Based on Table 4-2 of the Copper Action Plan) iry of Potential POTW Phase I Copper Control Actions	ction Plan) er Control Actions	
Phase I Number (Dialogue)	Description	Lead Party	Implementation Mechanism	Source (s) addressed; potential effectiveness
CI-3 (19)	Update and re-evaluate source identification (MCMP for copper) and prioritize sources based on effectiveness evaluation of	RWQCB – convene powers to be (see Finding 12 of the POTW permit amendment)	NPDES permits and other CWC regulatory mechanisms	Unknown at current time
	future potential control actions. Prepare an implementation plan reflecting the priorities and implement agreed upon Phase I control actions.			
C14 (20)	Prepare and implement a Phase I plan for improved corrosion control based on evaluation of results of Baseline measures.	POTWs/SCVWD and other suppliers	POTW permits and other CWC regulatory mechanisms	Corrosion related copper; unknown at current time
CI-7 (36)	Develop Phase II Implementation Plan for POTW expansion of water recycling	POTWs	POTW Permits	POTW; cost-benefits need to be evaluated as part of considering additional efforts
CI-8	Evaluate and investigate important topics that influence uncertainty with LSB Impairment Decision Phytoplankton toxicity and movement (IAR Section 5.3.1) Section 5.3.1)	SCBWMI – Core Group (Assistance via POTW and /SCVURPPP and Co- permittees)	Encourage and identify resources (coordinate with other efforts/investigations such as those of RMP, NOAA, USGS, etc)	NA (special studies)

Approved for Transmittal to RWQCB on August 23, 2000
Final Revision made by BMM/RS August 23, 2000
Appendix A – prepared to reflect qnly POTW Control Actions
(Includes Urban Runoff Permit Re-issuance Work Group Input)

Appendix A	(Based on Table 4-2 of the Copper Action Plan)	Summary of Potential POTW Phase I Copper Control Actions
------------	------------------------------------------------	----------------------------------------------------------

		•		
Phase I Number (Dialogue)	Description	Lead Party	Implementation Mechanism	Source (s) addressed; potential effectiveness
6-IO	Evaluate and investigate important Factors that Influence Conner Fate	SCBWMI – Core Group (Assistance via POTW and //SCVURPPP and Co-	Encourage and identify resources (coordinate with other	NA (special studies)
	(Potential Reduction in Uncertainty is Moderate to	permittees)	efforts/investigations such as those of RMP,	
	High)¹ • Investigate flushing time		NOAA, USGS, etc)	
	estimates for different wet weather conditions		•	
	 Investigate location of northern boundary 			
	conditionDetermine Cu-L1 and L2			
	complex concentrations			
	Investigate algal uptake/toxicity with			
	competing metals			
CI-10	Evaluate results of tracking industrial virtual closed-loop	POTWs	POTW Permits	Unknown at current time
	wastewater efficiency measures and develon			
	potential actions. Prepare an			
	implementation plan reflecting the priorities and			
	implement agreed upon Phase I control actions.			
CI-11	Develop Phase II	POTWs	POTW Permits	Unknown at current time
	Implementation Plan for POTW process optimization			

	/		

A/Reg Subgroup
Approved for Transmittal to RWQCB on August 23, 2000
Final Revision made by BMM/RS August 23, 2000
Appendix A – prepared to reflect only POTW Control Actions
(Includes Urban Runoff Permit Re-issuance Work Group Input)

Appendix A	(Based on Table 4-2 of the Copper Action Plan)	Summary of Potential POTW Phase I Copper Control Actions
------------	------------------------------------------------	----------------------------------------------------------

ŀ				
Phase I Number (Dialogue)	Description	Lead Party	Implementation Mechanism	Source (s) addressed; potential effectiveness
CI-12	Develop a Phase II Plan including a re-evaluation of Phase I actions	RWQCB – convene powers to be (see Finding 12 of the POTW permit amendment)	CWC regulatory mechanisms	Unknown at current time

See Table D "Task 1: Conceptual Model Report for Copper and Nickel in Lower South San Francisco Bay" final report, December 1999 (see Appendix 4-2).

M/Reg Subgroup

Approved for Transmittal to RWQCB on August 23, 2000
Final Revision made by BMM/RS August 23, 2000
Appendix A – prepared to reflect only POTW Control Actions
(Includes Urban Runoff Permit Re-issuance Work Group Input)

	(Base	Appendix A Sased on Table 4-3 of the Copper Action Plan) mary of POTW Phase II Copper Control Actions	· Action Plan) Control Actions	
Desc	Description	Lead Party	Implementation Mechanism	Source (s) addressed; potential effectiveness
Rec thro	Reconsider usefulness of managing storm water through POTWs	POTWs (with assistance from SCVURPPP and Co-permittees)	CWC regulatory mechanisms	Unknown at current time
add me	Implement plan for additional corrosion control measures	POTWs/SCVWD and other suppliers	POTW permits and other CWC regulatory mechanisms	Corrosion related copper; unknown at current time
pro mea	Implement Phase II POTW process optimization measures	RWQCB –convene powers to be (see Finding 12 of the POTW permit amendment)	POTW permits	Unknown at current time; costeffective and cost-benefit analysis required
Iml Pha rec	Implement agreed upon Phase II expansion of water recycling programs	RWQCB -convene powers to be (see Finding 12 of the POTW permit amendment)	POTW permits	Unknown at current time; cost- effective and cost-benefit analysis required

BMM/Reg Subgroup
Approved for Transmital to RWQCB on July 27, 2000
Final Revision made by BMM/RS August 23, 2000
Appendix A – prepared to reflect only POTW Control Actions
(Includes Urban Runoff Permit Re-issuance Work Group Input)

Appendix A (Based on Table 4-1 of the Copper Action Plan) Summary of POTW Baseline Copper Control Actions¹

Baseline	Continuos	Description	Lead Party	Implementation Time-	Implementation	Source (s)
Number	Improvement/			Frame	Mechanism	addressed;
(angama)	Plan					potential
CB-3 (11 & 35)	C-13 & C-35/ IND-1 & IND-2	Complete Industrial- 2: investigations (based on	SCVURPPP & Co-	Complete IND-2 Technical	Urban Runoff and Industrial	Address
				OOOT lending _ nodes	Storm water Fermits	portion of
		implement reasonable controls	Possibly POTW permits	Conduct Pilot Outreach	Reporting conducted as part of	very small (<1-
		in conjunction with industry	(clarify need by March	Campaign FY99-00 & 00-01	SCVURPPP and Co-permittees	2% of copper
		manufacturers with conser	COVI as part of	(4/13/00 Work Plan scope)	Annual Report. (SCVURPPP	from urban
		platting) to reduce elevated	Plan)		and Co-permittee FY 99-00	runoff)
		levels in runoff from targeted			2 score Enters West Diag	
		industry including			will contain description of	
		development/implementation			additional tasks based on	
		of education and outreach			Industrial-2 results.)	
		plan				
		Clarify linkage with POTW			Develop approach to	
		Pretreatment Programs			implement Area-Wide as part	
					to Pilot Results)	
CB-3	-	Continue current efforts and	City of Palo Alto	Ongoing	POTW permit	Corrosion
(2)		track corrosion control	Environmental			related copper;
		opportunities:	Compliance Unit (track	(start reporting as part of	Reporting conducted as part of	limited
		• Continue educational	and report	2000 Annual Report)	annual Pretreatment Program	effectiveness
		outreach, within the City	developments to the	-	report.	
	-	of Palo Alto, to plumbers	SCBWMI)			
		and designers to reduce	(
		corrosion of copper pipes				
		via better design and				
	-	installation			•	
		Track developments in	-			
	,	(a) alternatives to copper				
		piping (b) corrosion				

BMM/Reg Subgroup
Approved for Transmital to RWQCB on July 27, 2000
Final Revision made by BMM/RS August 23, 2000
Appendix A – prepared to reflect only POTW Control Actions
(Includes Urban Runoff Permit Re-issuance Work Group Input)

Appendix A (Based on Table 4-1 of the Copper Action Plan) Summary of POTW Baseline Copper Control Actions¹

Betellen						
Number (Dialogue)	Improvement/ Metals Control Plan	Description	Lead Party	Implementation Time- Frame	Implementation Mechanism	Source (s) addressed; potential
		inhibitors, and (c) other methods of reducing copper corrosion				
CB-13 (35)	NA	Track POTW Pretreatment Program efforts and POTW loadings	POTWs	Ongoing	POTW NPDES Permits (reporting part of Annual SMR and Pretreatment Program reports)	Tracking effort
CB-14 (36)	NA	Track and encourage water recycling efforts	POTWs	Ongoing	Reporting through POTWs Annual Water Recycling report and/or Annual SMR	POTW; cost- benefits need to be evaluated as part of considering additional
CB-17	¥ Z	Track and encourage investigation of several important topics that influence uncertainty with Lower South Bay Impairment Decision Phytoplankton toxicity and movement (IAR Section 5.3.1) Section 5.3.1) Loading uncertainty Encourage incorporation of appropriate bioassessment tools into ongoing monitoring programs to track presence of conner-scensitive taxa in I.S.B.	SCBWMI – Core Group (assistance via POTW and SCVURPPP and Co-permittees)		Track and encourage RMP, NOAA, USGS, etc.	NA (Special Studies)

BMM/Reg Subgroup
Approved for Transmital to RWQCB on July 27, 2000
Final Revision made by BMM/RS August 23, 2000
Appendix A – prepared to reflect only POTW Control Actions (Includes Urban Runoff Permit Re-issuance Work Group Input)

1

Appendix A (Based on Table 4-1 of the Copper Action Plan) Summary of POTW Baseline Copper Control Actions

Baseline Number (Dialogue)	Continuos Improvement/ Metals Control	Description	Lead Party	Implementation Time- Frame	Implementation Mechanism	Source (s) addressed; potential
		copper-sensitive taxa in LSB. Prepare issue paper on feasibility and cost of addressing phytoplankton toxicity ouestions	RWQCB (Tom Mumley)			
CB-18	¥	Track and encourage investigation of important Factors that Influence Copper and Fate (Potential Reduction in Uncertainty is Moderate to High) ² • Investigate flushing time estimates for different wet weather conditions • Investigate location of northern boundary condition • Determine Cu-L1 and L2 corruplex concentrations • Investigate algal uptake/toxicity with competing metals	SCBWMI - Core Group (assistance via POTW and SCVURPPP and Co-permittees)		Track and encourage RMP, NOAA, USGS, etc.	NA (Special Studies)
CB-19	N	Continue to promote industrial water use and reuse efficiency. These programs may include workshops, outreach, incentives, or audits. (see Appendix 4-1#35)	POTWs	Ongoing	POTW Permits	Unknown

BMM/Reg Subgroup
Approved for Transmital to RWQCB on July 27, 2000
Final Revision made by BMM/RS August 23, 2000
Appendix A – prepared to reflect only POTW Control Actions (Includes Urban Runoff Permit Re-issuance Work Group Input)

1

Appendix A (Based on Table 4-1 of the Copper Action Plan) Summary of POTW Baseline Copper Control Actions¹

Baseline Number (Dialogue)	Continuos Improvement/ Metals Control Plan	Description	Lead Party	Implementation Time- Frame	Implementation Mechanism	Source (s) addressed; potential effectiveness
CB-20		Revise Copper Conceptual Model report findings and produce status report (revise conceptual model uncertainty table, appendix based on available information)	SCBWMI (with assistance from POTWs and SCVURPPP & Copermittees)	Permit Application	CORE GROUP short-term issue Update as part of NPDES Permit application process	Unknown
		•			Possible linkage and assistance from North Bay effort as well as RMP and RWQCB TMDL efforts	

Annual Reports of NPDES permitted agencies (POTWs and SCVURPPP) will contain a summary of the status of all CAP items.

See Table D "Task 1: Conceptual Model Report for Copper and Nickel in Lower South San Francisco Bay" final report, December 1999 Contained in Appendix 4-2.